



ecology and environment, inc.

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International Specialists in the Environmental Sciences

US EPA RECORDS CENTER REGION 5



486811

November 12, 1984

Mr. Larry Boettcher
John Sexton Contractor & Co.
1815 South Wolf Road
Hillside, IL 60162

Dear Mr. Boettcher:

This letter is in response to Eldredge Engineering Associates, Inc.'s questions regarding the sampling and analytical procedures to be followed by Ecology and Environment Inc. while sampling at Sexton operated landfills. The Eldredge letter is attached for reference. Also given to Sexton, is an updated and revised sampling and analytical procedure manual. The manual given to Sexton on October 1, 1984 should be discarded. The newer manual should directly answer most of Eldredge's questions.

Eldredge question #1 can be answered on Page D-4, Paragraph 1 of the inorganic protocol manual. "Samples prepared by this method may be analyzed by AAS or ICP for the following metals." The laboratory has its choice of either AAS or ICP for the metals being studied, of which are listed on Page D-4.

Eldredge question #2 can be clarified by Section E of both the organic and inorganic protocol manuals. Section E describes the Quality Control requirements.

Eldredge question #3 - organic and inorganic analytical analysis are routine for environmental organics and metals and nowhere is the number of analytical determinations a determining factor of the analytical services needed. The level of analysis is described in Section D and the Quality Control Section E.

Eldredge question #4 is clarified with the new updated and revised protocol manuals for organic and inorganic analysis. Chemical sampling and preservation procedures are covered in Section F. The following quantities of sample should be supplied for each sample:

Sample:	Organic - VOA	2 - 40 ml vials
	Organic	2 - 1/2 gallons
	Metals	1 - 1 liter

An extra liter may be required for metals, since the sample has to be field filtered prior to preservation.

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Eldredge question #5 is answered in Section F.

Eldredge question #6 is correct in the assumption that a typographical error was at fault. Inorganic - metals samples should be filtered using a 0.45 micron filter, not organic samples.

Eldredge question #7 is answered with the following sampling protocol. If a well is purged dry prior to the removal of 3 - 5 volumes, then the recharge is sampled and the amount bailed is noted. If the recharge is slow and limited, the samples will be taken in this order: metals, organics, organic-VOAs.

Eldredge question #8 - After the purging of 3 - 5 volumes from each well, the water column is assumed to be fresh and well mixed, but sampling usually occurs from the midpoint of the water column to the lower portions of the water column, without stirring up too much sediment. If the well is bailed dry and the recharge is being sampled, then of course this may be considered a bottom sample.

Eldredge question #9 is referred to in Section E. A field duplicate and a field blank are required for each sampling project.

Eldredge question #10 - Ecology and Environment will supply their own bottles, will filter their own inorganic samples and will be responsible for the chain-of-custody, packing and transportation of their own samples only.

Eldredge question #11 - The organic chemicals listed are required to be analyzed by the routine analytical services.

It should be noted that all analytical service laboratories performing organic and metal analysis under U.S. EPA analytical methods, must pass a performance evaluation test to be allowed to analyze those compounds. Any laboratories which have not passed the test puts the results into question.

I hope that this letter and the procedure manuals satisfactorily answer all of Eldredge's questions. If further questions on the analytical procedures arise, please contact Chuck Elly of Sample Management for the U.S. EPA at 312-353-9087. If questions on the field sampling procedures arise, please contact me at 312-663-9415.

Sincerely,

Daniel J. Cozza

DJC:2W